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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/506,609	09/10/2004	Teruhisa Ishikawa	P25931	1271
7055 7590 03/18/2008 GREENBLUM & BERNSTEIN, P.L.C. 1950 ROLAND CLARKE PLACE RESTON, VA 20191				
EXAMINER MERCADO, JULIAN A				
ART UNIT		PAPER NUMBER		
1795				
NOTIFICATION DATE		DELIVERY MODE		
03/18/2008		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

gbpatent@gbpatent.com  
pto@gbpatent.com

**Office Action Summary****Application No.**

10/506,609

**Applicant(s)**

ISHIKAWA ET AL.

**Examiner**

JULIAN MERCADO

**Art Unit**

1795

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) \_\_\_\_ is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 5 is/are rejected.
- 7) ☒ Claim(s) 3, 4 and 6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SI/302)  
Paper No(s)/Mail Date 11-30-04
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_

## **DETAILED ACTION**

### ***Information Disclosure Statement***

The Information Disclosure Statement filed on November 30, 2004 has been considered by the examiner.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 recites the limitation "the winding cores" in line 11. There is insufficient antecedent basis for this limitation in the claim, insofar as only a single "winding core" is recited in line 2.

### ***Claim Rejections - 35 USC § 102 and 103***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Miller et al. (U.S. Pat. 6,461,759 B1).

Miller et al. teaches a battery comprising a wound electrode group including a laminated electrolyte stack of a positive and negative electrode and a separator therebetween. The patentees do not explicitly teach a difference  $L$  in length in accordance with the claimed relationship  $L = 2\pi r + (W \times k)$ . However, the patentees disclose that the innermost bend regions [16] are "the sharpest or tightest (smallest radius) sections of the wound cell stack assembly..." See col. 3 lines 47-60. As understood by the examiner, the claimed relationship  $L = 2\pi r + (W \times k)$  requires a difference in length  $L$  between the inner and outer turns such that the outer turn is longer than the inner turn. It is asserted that Miller et al. teaches or at least suggests this feature insofar as the "bend regions 16 become progressively shorter toward the center of the electrode strip 10." See col. 3 line 47 et seq. Thus, it is asserted that the claimed difference in length  $L$  is taught or suggested, inherently, by the prior art, absent of a showing by

applicant that the claimed invention distinguishes over the reference. *In re Best*, 195 USPQ at 433, footnote 4 (CCPA 1977) and *In re Spada*, 15 USPQ 2d 1655 (Fed. Cir. 1990)

Claims 2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kageyama (U.S. Pat. 5,658,683) in view of Wyser (U.S. Pat. 6,190,794 B1).

To the extent that the claims are understood by the examiner for the reasons set forth under 35 U.S.C. 112, second paragraph (discussion above), Kageyama teaches a method for manufacturing a wound electrode including a laminated electrolyte stack of a positive and negative electrode and a separator therebetween, wherein a winding core [9] is removed after completion of the winding process. See col. 4 line 62 et seq.

Kageyama does not explicitly teach the method using a spacer. However, Wyser in a similar method for manufacturing a wound electrode teaches setting a spacer [31] at a plurality of locations between two adjacent turns of the electrode stack. The spacers are removed at the completion of the winding process, "[o]nce the winding is finished, positioning rods 31 are removed...." See col. 4 lines 12-55. The skilled artisan would find obvious to modify Kageyama's invention by employing a spacer, as taught by Wyser. The motivation for such a modification is to remove "the stress at the welds... so that no mechanical stress is generated, for example, during charging/discharging operations for a storage battery." (see Wyser, ib.)

#### ***Allowable Subject Matter***

Claims 3, 4 and 6 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of

the base claim and any intervening claims. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record does not teach or suggest the instant invention regarding a method for manufacturing a wound electrode group wound around a winding core comprising setting a spacer and removing the winding core and spacer, wherein the electrode stack is wound such that a difference  $L$  in length between each turn of two adjacent inner and outer turns satisfies the claimed  $L = 2\pi + (W \times k)$ .

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian Mercado whose telephone number is (571) 272-1289. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

/J. M./

Examiner, Art Unit 1795

/PATRICK RYAN/

Supervisory Patent Examiner, Art Unit 1795